

WHAT IS CLAIMED IS:

1. A light unit for a display device comprising:

a light source emitting multi-wavelength white light;

5 a light guide plate located at one side of the light source, the light guide plate being adapted to transmit the light emitted from the light source therethrough;

a color dispersion sheet located at an opposite surface to a front surface of the light guide plate, the color dispersion sheet being adapted to refract the light transmitted through the light guide plate at different angles according to wavelength and to reflect the refracted light back into the light guide plate; and

a diffraction pattern formed on at least one of the front surface and a rear surface of the light guide plate, the diffraction pattern being adapted to allow rays of the light proceeding at the different angles according to wavelength through the color dispersion sheet to exit at the same angle.

20 2. The light unit for a display device as set forth in claim 1, wherein the color dispersion sheet comprises an inclined surface, into which the light passing through the light guide plate enters at an incident angle satisfying the following Equation,

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$$\sin \alpha = - m\lambda / nd$$

wherein,

$\alpha$  : an angle defined between the light passing through the light guide plate and a line perpendicular to a light exit surface (namely, an incident angle)

5         $m$  : order (...,-1,0,1,2,3,...)

$\lambda$  : wavelength

$d$  : a pitch of a diffraction pattern formed at the light guide plate

$n$  : a refractive index of the light guide plate

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3. The light unit for a display device as set forth in claim 2, wherein the color dispersion sheet has a sectional shape formed by repeatedly arranging a plurality of triangular projections at constant pitches.

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4. The light unit for a display device as set forth in claim 3, wherein the pitch of the color dispersion sheet is in a range between 0.5mm and 2.0mm.

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5. The light unit for a display device as set forth in claim 1, wherein the light enters and exits into and from the color dispersion sheet through the same surface thereof.

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6. The light unit for a display device as set forth in claim 1, wherein the light enters and exits into and from the

color dispersion sheet through different surfaces,  
respectively.

7. The light unit for a display device as set forth in  
5 claim 1, wherein the diffraction pattern is a hologram  
diffraction pattern obtained through a hologram exposure  
process.

8. The light unit for a display device as set forth in  
10 claim 1, further comprising an optical path correcting member  
located between the light source and light guide plate, the  
optical path correcting member being adapted to allow an  
optical path of the light entering the light guide plate to be  
inclined at a certain angle from the light guide plate and a  
15 horizontal plane.

9. The light unit for a display device as set forth in  
claim 1, wherein a refractive index of the color dispersion  
sheet is larger than 1.0 and smaller than 1.8.  
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10. The light unit for a display device as set forth in  
claim 1, wherein the color dispersion sheet is made of  
transparent synthetic resin.

25 11. The light unit for a display device as set forth in

claim 1, wherein the color dispersion sheet is made of an optical medium having a refractive index of a flint series.